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10/018,625	03/07/2002	Marcel Aeschlimann	FRR-12806	5185

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RANKIN, HILL, PORTER & CLARK, LLP  
700 HUNTINGTON BUILDING  
925 EUCLID AVENUE, SUITE 700  
CLEVELAND, OH 44115-1405

EXAMINER

GARCIA, ERNESTO

ART UNIT PAPER NUMBER

3679

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/018,625

Applicant(s)

AESCHLIMANN ET AL.

Examiner

Ernesto Garcia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 4-6, 8, 14 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9-13, 15 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 4-6, 8, 14 and 16-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 10. Regarding claim 4, this claim does not read on elected Figure 6b as the mechanical excitation is done through ultrasonic (see new specification; paragraph 41 in lines 9-10). Regarding claims 5 and 6, there is no secondary movement superimposed on penetration and therefore this claim does not read on elected Figure 6b. Claims 5 and 6 read on non-elected species 4a-ac (see paragraph 38 on new specification). Claim 8 also does not read on elected Figure 6b as there is no additional layer of meltable material present between common surfaces. Claim 8 reads on Figure 5a as the layer is between common surfaces (59, 60).

Applicant's election with traverse of claims 1-13, 15 and 19 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the examiner has not applied the appropriate standard in determining whether more than one invention is presented by the claims of the present application. This is not found persuasive because the restriction is not between more than one inventions, but rather among species. Under PCT practice, a method cannot be restricted between an apparatus and an article.

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Applicant also argued that species/genus practice in the U.S. does not exist in international applications and cannot be applied to national stage applications in the U.S. This is not found persuasive because applicant has not shown where in the M.P.E.P this recitation is found. Applicant is urged to review rule 13.1 for species. Applicant also argued that unity of the claims was implicitly acknowledged during the international phase by the ISA and the IPEA. Again, the examiner has not made a restriction between the method and the apparatus as the method uses the technical features of the apparatus and therefore restriction between the method and the apparatus is not required. However, the requirement between species is proper. The same or corresponding technical features lacking between species was provided in the restriction. Those same technical features between each of the species are lacking, and not the claimed inventions (the method and the corresponding apparatus),.

The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "22" has been used to designate a flat end (Fig. 2a), a conical end (Fig. 2b), a pyramidal end (Fig. 2c), and concave end (Fig. 2d); character "20" has been used to designate a joining element with a flat end (Fig. 2a), a joining element with enlargements 26 (Fig. 2b), a joining element with ribs and a pyramidal end

(Fig. 2c), a joining element with ribs and a concave end (Fig. 2d), and a joining element with large ribs and small ribs; character "23" has been used to designate a round sharp edge (Fig. 2a) and a curved sharp edge (Fig. 2d); and, character "25" has been used to designate large ribs and small ribs (Fig. 2e). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 1, 11, 12 and 19 are objected to because of the following informalities:

regarding claim 1, the step of the method are unclear; furthermore, it is unclear whether "thermally melting a joint element" in line 1 is a step different than "generating a mechanical excitation" in line 5 or an abstract idea.

regarding claim 11, the limitation "smaller" in line 3 should be --small-- and the limitation "bigger" in line 3 should be --big--.

regarding claim 12, the limitation "and/or" should be --or--;

regarding claim 19, it is unclear whether "the structure" in line 3 is the same component as "the body (66)". For examination the examiner has considered the body and the structure to be the same component. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 7, 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In paragraph 41 of the new specification, applicant discloses a force  $F$  acting on the joining element 67 of the elected figure and simultaneously the joining element 67 is mechanically excited through ultrasound while penetrating. The snapshot on Figure 6b shows the force and the excitation 12 being applied simultaneously. Therefore, the description of Figure 6b does not support the mechanical excitation being generated once the surface has been penetrated as recited in claim 1, but rather the excitation is simultaneously generated while the force is applied.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7, 9-13 and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by publication, WO98/42,988.

Regarding claim 1, the publication '988 discloses in Figure 3 a method of joining bodies **1** and **2.1** (upper half is shown in Fig. 1) . The method comprises:

thermally melt a joint element **3**;

apply a direct force **F** on the joining element **3** (Fig. 1), which the element **3** acts on a surface **41** of at least one of bodies **1** and penetrates the surface **41**;

generate a mechanical excitation (see English abstract), once the element **3** penetrates the surface **41**, such that during further penetration of the element **3** into the at least one of the bodies **1** advance movement is maintained due to the force; and

maintain melted material of the element due to the mechanical excitation so that the melted material is hydraulically displaceable into a surrounding area of the at least one of the bodies (Fig. 3). Applicant is reminded that the melted material is displaced into the surrounding area due to the force being applied at the same time the material is excited.

Regarding claim 2, the mechanical excitation is applied after at least one of predetermined depth of penetration of the joining element **3** into the at least one of the bodies or after a predetermined load level of the directed force has been reached.

Regarding claim 3, the mechanical excitation takes place by ultrasound (see abstract).

Regarding claim 7, the bodies **1,2.1** are joined by the joining element **3**.

Regarding claim 9, one of the bodies **1, 2.1** comprises a bore **4**.

Regarding claim 10, at least one of the bodies **1, 2.1** consists of porous material (see English Abstract).



Regarding claim 11, the publication '998 discloses in Figure 2 a joining element **3.2** containing thermo-plastic material **31**. The element **3.2** is pin shaped and comprises at least one zone with a small cross section and at least one zone with a big cross section.

Regarding claim 12, the joining element **3.2** comprises a round cross section.

Regarding claim 13, the jointing element **3.2** comprises a flattened end (the flattened end touches **31**).

Regarding claim 19, the publication discloses in Figure 2 a joint with one element **3.2** or several joining elements. The joining element **3.2** contains thermo-plastic material **31**. The element **3.2** is pin shaped and comprises at least one zone with a small cross section and at least one zone with a big cross section. Melted down material of the joining element **3.2** is hardened with a structure **1** of a compressed base material (wood; see abstract) of a body.

Claims 11 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese patent, JP-5-245,941.

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Regarding claim 11, the Japanese patent discloses in Figures 3A and 3B a joining element **1** containing thermo-plastic material. The element **3.2** is pin shaped and comprises at least one zone with a small cross section **1a** and at least one zone with a big cross section **1h**.

Regarding claim 15, the joining element **1** comprises direction-giving elements in a shape of longitudinally aligned ribs (see Figure 3B).

### ***Conclusion***

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese patents, JP-5-245,941 and JP-55-121,024 show a similar connecting element.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final

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communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.



**Lynne H. Browne**  
**Supervisory Patent Examiner**  
**Technology Center 3600**

E.G.

November 19, 2003